Centrality PA168X IP Phone LAN Configuration Guide

This guide supplies a step-by-step operation on how to install and configure Centrality PA168X IP Phone in LAN.

1 **Install the IP Phone** (Take PA168S IP phone as example):

1) Insert handset cord into handset cord jack at the left side of the base to connect the handset to the base. Refer to Fig 1.1 please.

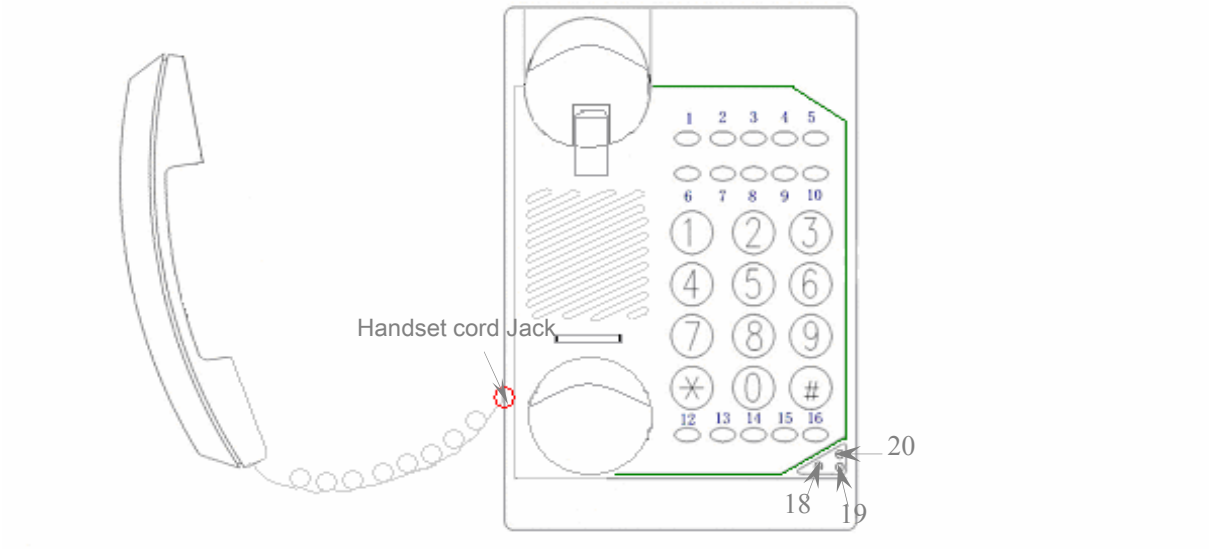

Fig 1.1 Connect the Handset and the Base of the Phone

2) Plug the power adapter cord into the Power Jack. Then plug the other end of the cord into the appropriate wall outlet. Refer to Fig 1.2 please.

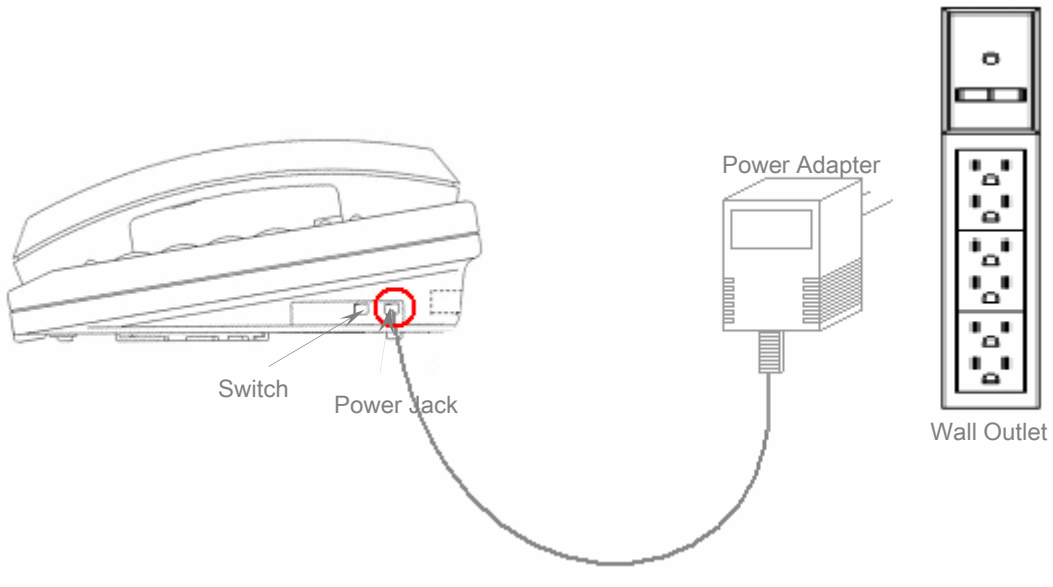

Fig 1.2 Connect Power Adapter to the Phone

3) Connect the IP phone to LAN: Plug the RJ-45 Ethernet cable into the Ethernet Jack. Plug the other end of the cable into an appropriate LAN HUB or switch port. Refer to Fig 1.3 please.

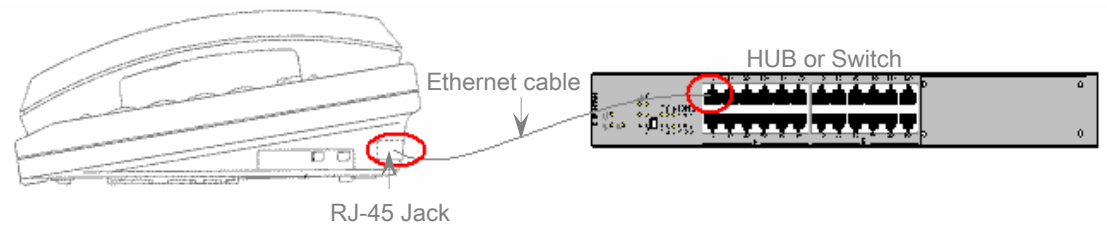

Fig 1.3 Connect the Phone into the LAN

4) Turn on the Phone: Turn on the phone by pulling the power switch to ON. Verify that No.18, 19 and 20 lights are on together, and then No.18 light is off; No.19 light blinks or is off and No. 20 light blinks or is on.

5) Pick up the handset or press Speaker , the dialed tone indicates that the phone starts successfully and is ready for call.

2 Check and note the IP address of PC used to set the phone.

1) Choose **Start>Run**, please refer to Fig 2.1.

2) In popup **Run** dialog, input **cmd** into **Open** field and click **OK** button, then DOS prompt will be displayed. Refer to Fig 2.2 and 2.3 please.

Note If the PC's OS is WinXP/2000/NT, please input **cmd**; if PC's OS is Win9X, please input **command**。

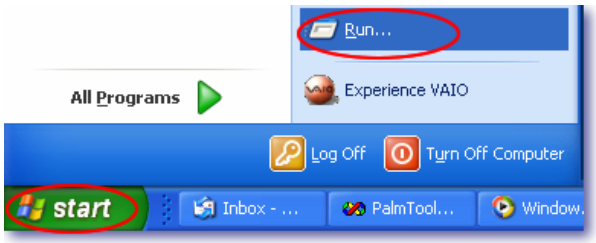

Fig 2.1 Choose Start>Run

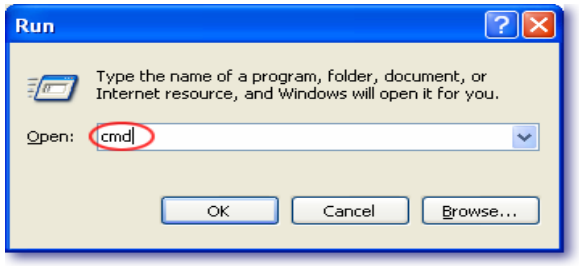

Fig 2.2 Enter DOS prompt

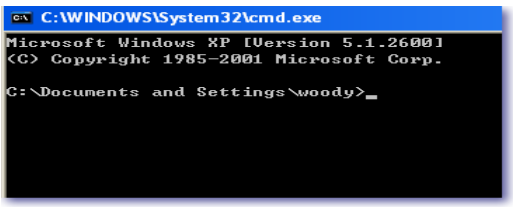

Fig 2.3 DOS prompt

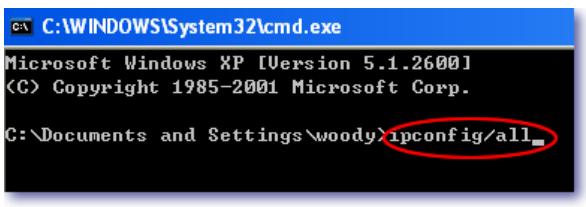

Fig 2.4 Run ipconfig Command

3) In DOS prompt, input **ipconfig /all** and press **Return**. Refer to Fig 2.4.

Note If the PC's OS is WinXP/2000/NT, please use **ipconfig/all** command; if PC's OS is Win9X, please use **ipconfig** command。

4) The configuration of PC net adapter will be displayed. Refer to Fig 2.5

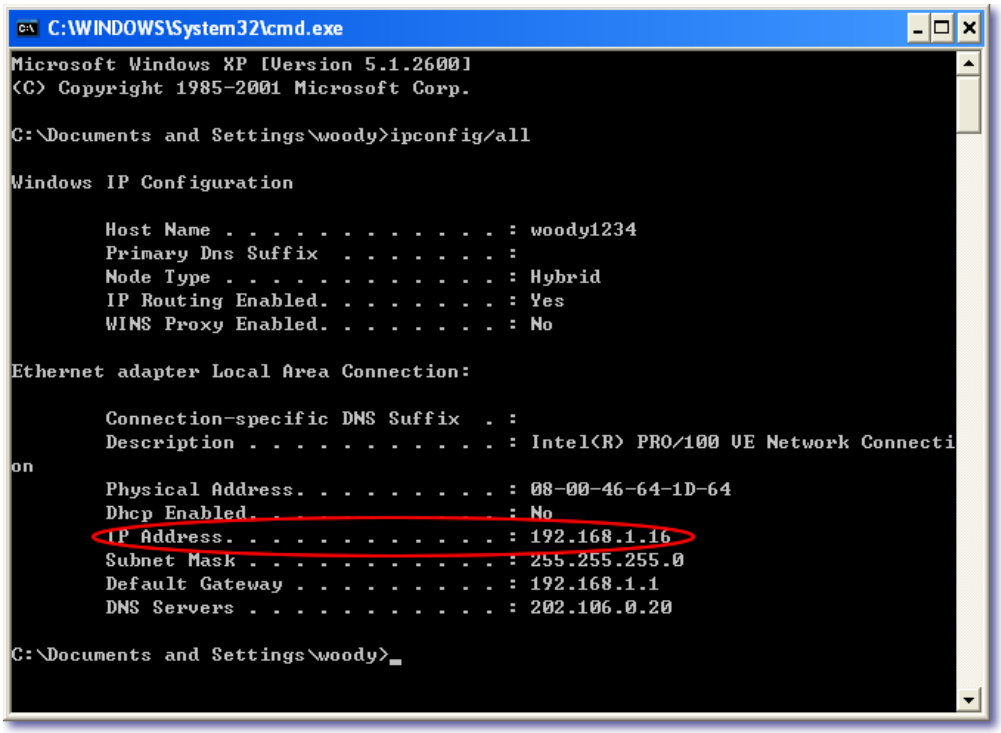
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\woody>ipconfig/all
Windows IP Configuration
Host Name . . . . . : woody1234
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : Yes
WINS Proxy Enabled. . . . . : No
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) PRO/100 VE Network Connecti
on
Physical Address. . . . . : 08-00-46-64-1D-64
Dhcp Enabled. . . . . : No
IP Address. . . . . : 192.168.1.16
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
DNS Servers . . . . . : 202.106.0.20
C:\Documents and Settings\woody>

Fig2.5 Check the IP address of PC on WinXp/2000/NT OS

3 Check the configured states of the IP phone: Press Local IP , then you will hear the voice prompted IP address of the phone.

- If the voice prompted IP address is 0.0.0.0, it indicates that DHCP is enabled but the phone is not assigned IP address. Now please do as follows to disable DHCP manually.

- If your IP phone has no LCD, please do as follows:

1) Press

or pick up the handset, and then input the password of the phone. When No 18 light begins blinking once a second, please go to the next step.

Note Press **Speaker** key or pick up the handset, and then input the password of the phone. Verify that No 18 light blinks once a second. It indicates that the phone is under **setting mode**

The default password of Centrality PA168X IP phone is 1234.

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2) Press

and

, then the phone will restart. Verify that No.18, 19 and 20 lights are on together, and then No.18 light is off; No.19 light blinks or is off ; No. 20 light blinks or is on. As soon as the phone restarts successfully, you can change the IP address of the phone.

3) Repeat step 1) to make phone enter setting mode again.

4) Set the IP address of the phone manually: According to the IP address of the PC, designate an IP address on the same segment to the phone. For example, the address of PC is 192.168.1.10; please designate 192.168.1.100 as IP address of the phone by pressing 192*168*1*100 keys on the keypad orderly, and then pressing

.

5) As soon as the phone restarts successfully, please go to step 4.

✎ **Note** Please verify that the IP address designated to Centrality PA168S IP phone is not used by other device in the same LAN.

- If your IP phone has LCD, please do as follows:

1) Using keypad to input the password of the IP phone and then press [#], till [Password:] is displayed on the LCD. Then please input the password of the phone again and press [Speaker] to enter setting mode.

2) When [network settings] is displayed on the LCD, press [Speaker] to enter submenu. Then press [Vol+] to turn over the menu, once the LCD displays [ip tyep 1[dhcp]], press [Local IP], then you will see a cursor flashing at the beginning of the second line. It indicates that you can change the setting of this item. Then please press [0] and [Speaker] to disable the DHCP. Once the LCD displays [ip type 0[static]], go to next step please.

3) Continue pressing [Vol+] to turn over the menu until the LCD displays [local ip XXX.XX.X.X], press [Local IP] to enter change mode. When a flashing cursor appears at the beginning of the second line, press 192*168*1*100 keys in order, and then press [Speaker] to confirm.

4) Then press [Redial] thrice to reach save setting menu [save settings]. Then please press [Speaker] to confirm the change. When the menu [save Are you sure?] is displayed on the LCD, press [Speaker] again to confirm. Once the IP phone restart successfully, you can go to step 4.

➢ If the voice prompted IP address is 255.255.255.255, it indicates that PPPoE is enabled but the phone is unsuccessful Dial-up. Now please do as follows to disable PPPoE manually.

- If your phone has no LCD, please do as follows:

1) Press [Speaker] or pick up the handset, and then input the password of the phone. When No 18 light begins blinking once a second, please go to the next step.

2) Press [0] and [Local IP], then the phone will restart. As soon as the phone restarts successfully, you can change the IP address of the phone.

3) Repeat step 1) to make phone enter setting mode again.

4) Set the IP address of the phone manually: According to the IP address of the PC, designate an IP address on the same segment to the phone. For example, the address of PC is 192.168.1.10; you

can designate 192.168.1.100 as IP address of the phone by pressing 192*168*1*100 keys on the keypad orderly, and then pressing [Local IP].

5) As soon as the phone restarts successfully, please go to step 4.

- If your IP phone has LCD, please do as follows:

1) Using keypad to input the password of the IP phone and then press [#], till [Password:] is displayed on the LCD. Then please input the password of the phone again and press [Speaker] to enter setting mode.

2) When [network settings] is displayed on the LCD, press [Speaker] to enter submenu. Then press [Vol+] to turn over the menu, once the LCD displays [ip type 2[pppoe]], press [Local IP], then you will see a cursor flashing at the beginning of the second line. It indicates that you can change the setting of this item. Then please press [0] and [Speaker] to disable the PPPoE. Once the LCD displays [ip type 0[static]], go to next step please.

3) Continue pressing [Vol+] to turn over the menu until the LCD displays [local ip XXX.XX.X.X], press [Local IP] to enter change mode. When a flashing cursor appears at the beginning of the second line, press 192*168*1*100 keys in order, and then press [Speaker] to

confirm.

4) Then press Redial thrice to reach save setting menu save settings. Then please press Speaker to confirm the change. When the menu save Are you sure? is displayed on the LCD, press Speaker again to confirm. Once the IP phone restart successfully, you can go to step 4.

- If the voice prompted IP address is neither 0.0.0.0 nor 255.255.255.255, it indicates that the phone is assigned an IP address successfully. If the IP address is at the same segment of PC, please take a note of it and then go to the next step. If the voice prompted IP address is not at the same segment of the PC, please refer to above operation to designate an IP address at the same segment of PC to the phone, and then go to the next step.

Note The same means IP address of two Ethernet devices get same net number and subnet mask. In brief with it, if head three digits of IP address of two devises with the same subnet mask (255.255.255.0) are same, we say that those two IP address are at the same segment. Such as 192.168.1.1 and 192.168.1.33 are at the same segment.

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4 Have completed above operation, please configure the phone as follows:

1) Open the setting tool: on a computer in the same segment with the phone, double click icon to open the PalmTool. Then input IP address of the

phone into **local IP address** field (such as 192.168.1.100), then click **phone setting** button.

✎ **Note** If you have not installed PalmTool, please download it by visiting http://www.aredfox.com/download/tools/PalmTool.zip

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✎ **Note** From version1.24, when **Debug** set as **0[disable]**, PalmTool can not connect to the IP phone directly. Then please set **Debug** as other value. When use above mentioned two methods to set IP phone, please use super password **19750407** to login to the configuration page. If this password is invalid, please ask phone provider for a valid one.

Set protocol service: according to different protocol, set different service. Refer to following context to get detailed operation:

a) H323 protocol : When H323 protocol is used, the relevant parameters are **use service**, **service addr**, **service port** and **phone number.**

① Set protocol service: With H323 protocol used, the protocol service refers to login the gatekeeper. Gatekeeper is the key component of H.323 protocols regulated by ITU-T. It provides an address translation service. With H323 protocol used, when you want to call other IP phone by dialing phone number instead of IP address, please check **use service** option and then type IP address or domain name of the GK (such as 203.93.9.57) into **service address** field.

Note If you have not got any gatekeeper, we suggest you to run a free gatekeeper based on open resource. Please visit www.gnugk.org or www.openh323.org to download a program and then run it on a PC with public IP. Please take a note of the IP address of this PC.

Note To let the phone log in voice gateway, please enter IP address or domain name of voice gateway into **service address** field without selecting **use service** check box, and then set **service port** as **1720**.

② Set service port: With gatekeeper used, please set serviceport as 1719

③ Set phone number: Enter a number into **phone number** field.

Note Without gatekeeper or gateway used, the IP phone can communicate with other IP phone or H323 terminal (such as Microsoft Netmeeting 3.01) with public IP address. The operations are as follows: Pick up the handset or press **Speaker**, and then use the keypad to enter the IP address of the other party. Please use"*"to replace ".". For example, the IP address of the device you wish to call is 166.111.19.88, please press 166*111*19*98 in order on the keyboard, and then press **Call** or # to place the call. Once the call connection has been established and the ring tone has sounded, wait for the other party to answer.

b) MGCP protocol :With MGCP protocol used, the relevant parameters are **use service**, **service address**, **service port**, **register port**, **id** and **account**.

① Set protocol service: With MGCP protocol used, the protocol service

refers to the Call Agent. The Call Agent controls the terminal and gateway. Once the user pick up the handset or dial a number, the CA will receive the signal and specify the means of the signal and then send out the action. Please check the **use service** option and then fill the IP address or domain name of the CA into **service address** field (such as 211.98.66.43).

② Set receive port of Call Agent：the default port is 2727；so please set **service port** as **2727**。

③ Set information send port: the default port is 2427；so please set **register port** as **2427**。

④ Set EndpointID：EndpointID is used to identify gateway and port of gateway. It includes two parts: Local name and Domain name. Local name used to identify different ports of one gateway; while Domain name used to identify gateway, it could be string or IP address of gateway. “LocalName @ DomainName” consists an EndpointID。 Please type the Local name and Domain name into **account** and **pin** fields respectively.

⑤ Set phone number: Enter a number into **phone number** field.

c) SIP protocol：With SIP protocol used, the relevant parameters are **use service**, **service address**, **service port** and **register port**.

① Set protocol service: with SIP protocol used, the protocol service refers to Proxy Server. Proxy server is a bridge between two clients. When the setting of a client is changed, the change will register to the Proxy Server directly. Please check **use service** option and then enter the IP address or domain name of SIP proxy server according to system into the **service address** field.

② Set service port: enter the default port 5060 into **service port** field.

③ Set register port: enter the default port 5060 into **register port** field.

④ Fill local name into **phone number** field.

✎**Note** RTP port should be an even number.

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d) Net2phone protocol :With Net2phone private protocol used, the relevant parameters are **use service**, **service address**, **service port**, **prepaid card**, **account** and **pin.**

① Set protocol service: with Net2phone private protocol used, the phone should login the designated server. Please check **use service** option and then type IP address (216.53.3.52; 4.43.114.39; 205.228.245.8 or 4.43.114.38) or domain name (call1.net2phone.com ; call2.net2phone.com ; skip1.net2phone.com or skip2.net2phone.com)

of server into **service address** field.

② Set servieport: fill the default number 6801 into **serviceport** field.

③ Set prepaid card: select **net2phone** from **prepaid card** dropdown list.

④ Set account: fill the account (such as 13801038908) into **account** field.

⑤ Set pin: fill the pin (such as 7085) into **pin** field.

Have completed above settings, click

button to confirm. If the phone gets a public IP, then the phone can communicate with other IP phone according to the requirement of the server. If the IP phone gets a private IP, then please go to step 3 to set the proxy according to the requirement of the server.

✎ **Note** Public IP is a unique IP address assigned by IANA, such as 202.106.192.118. Private IP, also called virtual IP is the IP address reserved by IANA for Private network. （ 10.0.0.1-10.255.255.255; 172.16.0.1-172.31.255.255 ） , (192.168.0.1-192.168. 255.255), such as 192.168.1.188.

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2) Set proxy server: if the phone gets a private IP, please refer to following steps to set proxy server after above operation：

- **Not use**: Not use proxy. When the IP phone and the protocol server are at the same segment, please select this option.

- **Use:** Select **use** in **use proxy** drop down list, then the program will use the share resource online to find the dynamic proxy.

- **Citron**: With H323 protocol used, when the phone login the supported Gnu GK, please use Citron private protocol by selecting **citron** option in **use proxy** dropdown list.

✎**Note** With Citron private protocol used, the phone can only log in the GnuGK supporting Call Routed, for example our test GK 203.93.9.57. Then please set the signal port, ras port, control port and rtp port as infamous port without port mapping.

- **Auvtech:** Select **auvtech** in **use proxy** dropdown list to use Auvtech private protocol system.

✎**Note** Auvtech protocol should be used with H323 and the special account system.

- **Stun:** Select **Stun** in **use proxy** dropdown list to use Stun when service system support Stun protocol.(only SIP protocol)

- **Vida:** Select **vida** in **use proxy** dropdown list to use Vida private protocol system.

- **Aivgr**: Select **aivgr** in **use proxy** dropdown list to use Aigvr private protocol system.

✎**Note** With **use** selected in **proxy** dropdown list, please type IP address of server

finding public IP into **proxy ip** field, such as **209.68.27.16**; if do not know server IP, just remain it as default value 0.0.0.0. With **stun** or **vida** selected in **proxy** dropdown list, please input proxy IP into **proxy ip** field according to system. If there is no any special requirement, just remain it as default value 0.0.0.0.

Complete the proxy configuration, the IP phone with private IP can communicate with other IP phone according to the server's requirement.

3) Enable multi-settings: From released version 1.08, the setting of IP phone is changed. More than one setting of parameters can be saved in an IP phone. Usually the phone uses current settings to call out. With **switch** is selected from **use inner line** dropdown list, the user can use backup settings 1 and backup settings 2 by dialing the number designated in **local prefix** and **nonlocal prefix**. Then the phone switches between multi-settings without changing the settings.

Note PA168S IP phone can save 5 settings, and when it is used, **multi-settings** allows you to switch between different system and operation. (H323 protocol only)

Save current settings: click

button to confirm the configuration. Once the phone restarts auto, current setting is saved into the phone.

4) Set backup setting: to allow the phone switch between different settings, please do as follows:

a) Write setting files: After the above setting is saved into the phone as current setting, please write the backup settings in txt format according to your requirement. For example: with H323 protocol used, backup setting 1 set the phone call other IP phone log in the gatekeeper 203.93.9.57; while backup setting 2 set the phone to call PSTN phone by eTalk card. Refer to following settings please:

```
[SETTING1]
service=1
serviceport=1719
proxy=2
serviceaddr=203.93.9.57
dialplan=0
prepaid=0

[SETTING2]
service=1
serviceport=1719
proxy=0
serviceaddr=202.91.230.91
dialplan=2
dialnumber=00
innerline=0
serviceid=ETNSGK
prepaid=2
account=0117ETNS
pin=586095682629
```

✎**Note** Parameters here are same with the telnet command. Letters in "[]"should be capital.

b) Update files: In PalmTool index page, input the IP address of the phone into the **IP address in chip**, and then click **Update Alternate** button, then

please select the saved setting files (such as setting.txt) in following window to update.

After updating, the backup settings cannot be seen in PalmTool. To check and change the backup setting, please use load, store and set command in Telnet. Now, let's take changing the dial rule in backup setting 2 as an example to learn how to use Telnet command. Enter Telnet command firstly: on the PC connecting with the phone, click **Start>Run**, and then input **telnet 192.168.1.100** into the **Run** dialog. Refers to following images please:

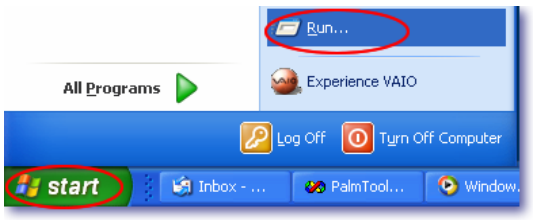


Fig4.4 Select Start>Run

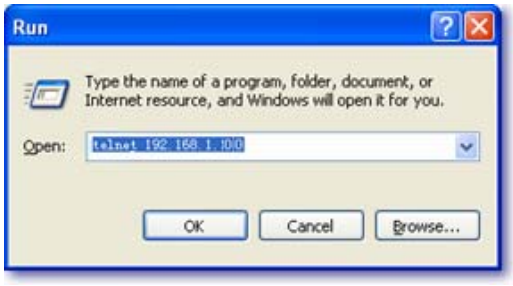


Fig4.5 Input Telnet command

In Telnet window, load backup setting 3 to the current position by using **load** and then check the setting with **get** command as follows:

```
PA168S V1.31 settings
Password: ********   ← Input super password
P:\>load 3          ← Load backup setting 3 to current position
P:\>get             ← Check current setting
iptype 0[static]
ip 192.168.1.178          subnetmask 255.255.255.0    router 192.168.1.254
dns 202.106.196.152    dns2 202.106.196.115          mac 00-09-45-65-a3-e6
protocol 0[h323]          proxy 2[citron]
```

Then you can change the setting with **set** command as follows:

```
upgradeaddr [empty]
ntsip 210.59.157.10        daylight 0[disable]
timezone 20[(GMT-03:00)Greenland]
P:\>set dialplan 1      ← Enable dial rule
P:\>set iddcode 86      ← Set country code
P:\>set iddprefix 00    ← Set country code prefix
P:\>set dddprefix 0     ← Set long distance code prefix
P:\>set dddcode 10      ← Set long distance code
P:\>store 3      ← Save current setting to backup setting 3
P:\>write      ← Confirm change
```

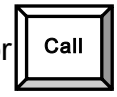
5 Usage of the phone

1) Place the calls:

a) Call other IP phones log in the same server as follows:

Pick up the handset or press

, and then use the keypad to enter the phone number of the other IP phone, such as 87452356. Then press

or 

to confirm. Once the call connection has been established and the ring tone has sounded, wait for the other party to answer. When the other party answers, you can begin speaking. When the call is over, put back the handset or press

again. The dialed number has been saved into the last calls made buffer.

b) With multi-settings being enabled, for example, current setting is calling other IP phone log in GK (203.93.9.57); while backup

setting 1 is calling ordinary phone by eTalk card, do as follows:

① Call other IP phone log in the same GK:

Pick up the handset or press Speaker, and then use the keypad to enter the phone number of the other IP phone, such as 87452356. Then press # or Call to confirm. Once the call connection has been established and the ring tone has sounded, wait for the other party to answer. When the other party answers, you can begin speaking. When the call is over, put back the handset or press Speaker again.

② Call ordinary phone by eTalk card:

Pick up the handset or press Speaker , and then switch to backup setting 1 by pressing the designated nonlocal prefix code, such as 9. Once you hear the eTalk card balance prompt, please dial the complete number of the other party, such as 00861082378008, and then press # or Call to confirm.

Once the call connection has been established, you will hear a number prompting the allowed speaking time. For example, 240, it means that you can communicate with the other party for 240 minutes.

When the ring tone has sounded, wait for the other party to answer. When the other party answers, you can begin speaking. When the call is over, put back the handset or press Speaker again.

2) Receive the calls: When the phone rings, you can receive the call by

following methods:

a) Use handset: Pick up the handset and begin speaking. When the call is over, put the handset back.

b) Handset to hand free: While receiving call with handset, press

on the keypad and then put down the handset. When the call is over, press

again.

c) Hand free: Press

to speak to the other party. When the call is over, press

again.

d) Hand free to handset: While receiving the call with the

Pressed, pick up the handset to continue the call. When the call is over, put back the handset.

✎**Note** To assure the quality of speaking; do not be far way from the speaker. The limitation is 40 CM.

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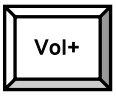
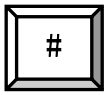
3) Review the calls:

a) Review the received calls: please press

with the phone turned on. Then you will hear the voice prompt of the latest received number. To turn over the record backward or forward, please press 

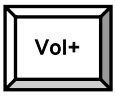
or

. During the reviewing, you can call the current nubmer. For example, when you hear “No.2 ,87452356”, you can press 

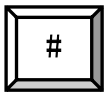
.Then the phone will call 87452356 without picking up the handset.

b) Review the missed calls: please press

with the phone

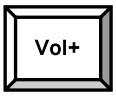
turned on. Then you will hear the voice prompt of the latest missed calls. To turn over the record backward or forward, please press 

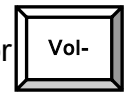
or

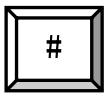
. During the reviewing, you can call the current number. For example, when you hear "No.2 ,87452356", you can press 

.Then the phone will call 87452356 without picking up the handset.

c) Review the made calls: please press

with the phone turned on. Then you will hear the voice prompt of the latest calls made. You can press 

or 

to turn over the record backward or forward. During the reviewing, you can call the current number. For example, when you hear "No.2 ,87452356", you can press 

.Then the phone will call 87452356 without picking up the handset.

Reserves the right to make changes in technical and product specification without prior notice.

Centrality PA168X IP Phone LAN Configuration Guide

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